PATENT COOPERAT. 1 TREATY

| | From the INTERNATIONAL BUREAU |
|--|--|
| PCT | To: |
| NOTIFICATION OF ELECTION (PCT Rule 61.2) Date of mailing (day/month/year) | Commissioner US Department of Commerce United States Patent and Trademark Office, PCT 2011 South Clark Place Room CP2/5C24 Arlington, VA 22202 ETATS-UNIS D'AMERIQUE |
| 03 April 2001 (03.04.01) | |
| International application No. PCT/US00/14637 | Applicant's or agent's file reference P23,149 PCT |
| International filing date (day/month/year) | Priority date (day/month/year) |
| 26 May 2000 (26.05.00) | 28 May 1999 (28.05.99) |
| Applicant | |
| STEFFAN, Robert, J. et al | |
| The designated Office is hereby notified of its election made. In the demand filed with the International Preliminary 20 December 2 In a notice effecting later election filed with the International Preliminary | Examining Authority on: 2000 (20.12.00) |
| 2. The election X was was not was not made before the expiration of 19 months from the priority of Rule 32.2(b). | date or, where Rule 32 applies, within the time limit under |

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Authorized officer

Zakaria EL KHODARY

Telephone No.: (41-22) 338.83.38

Facsimile No.: (41-22) 740.14 35



PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| International application No. International filing date (day/month/year) PCT/US00/14637 International filing date (day/month/year) 28 MAY 1999 28 MAY 1999 | |
|--|---------|
| PCT/US00/14637 26 MAY 2000 28 MAY 1000 | ear) |
| 20 MAT 1999 | |
| Applicant ENVIROGEN, INC. | |
| This international search report has been prepared by this International Searching Authority and is transmitted to the appliaccording to Article 18. A copy is being transmitted to the International Bureau. This international search report consists of a total of | cant |
| X It is also accompanied by a copy of each prior art document cited in this report. | |
| 1. Basis of the report a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item. the international search was carried out on the basis of a translation of the international application furnished Authority (Rule 23.1(b)). b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international was carried out on the basis of the sequence listing: contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. the statement that the information recorded in computer readable form is identical to the written sequence listing has furnished. Certain claims were found unsearchable (See Box I). Unity of invention is lacking (See Box II). the text is approved as submitted by the applicant. | to this |
| the text has been established by this Authority to read as follows: | |
| 5. With regard to the abstract, the text is approved as submitted by the applicant. the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority. 6. The figure of the drawings to be published with the abstract is Figure No | |
| as suggested by the applicant. | |
| because the applicant failed to suggest a figure. | ares. |
| because this figure better characterizes the invention. | |

Form PCT/ISA/210 (first sheet) (July 1998)*

INTERNATIONAL SEARCH REPORT

International application No. PCT/US00/14637

| IPC(7) | ASSIFICATION OF SUBJECT MATTER ::C12N 9/00, 9/02; C12P 17/02 | | |
|-----------------------|---|--|--|
| US CL According | :435/189, 117, 123, 280; to International Patent Classification (IPC) or to bot | h national classification and IPC | |
| | LDS SEARCHED | | |
| Minimum o | documentation searched (classification system follow | ved by classification symbols) | |
| U.S. : | 435/189, 117, 123, 280; | | |
| Documenta | tion searched other than minimum documentation to t | he extent that such documents are included | d in the fields searched |
| Electronic of EAST | data base consulted during the international search (| name of data base and, where practicable | e, search terms used) |
| C. DOC | CUMENTS CONSIDERED TO BE RELEVANT | | |
| Category* | Citation of document, with indication, where a | ppropriate, of the relevant passages | Relevant to claim No. |
| Y | US 5,358,860 A (HAGER et al) 2 document. | 25 October 1994, see entire | 1-13 |
| Y | US 4,269,940 A (PATEL et al) 26 M | ay 1981, see entire document. | 1-13 |
| Y | US 4,347,319 A (HOU et al) 31 Augu | ist 1982, see entire document. | 1-13 |
| | | | |
| Furth | er documents are listed in the continuation of Box C | See patent family annex. | |
| 'A' doc | icial categories of cited documents. cument defining the general state of the art which is not considered of particular relevance | *T* later document published after the inte date and not in conflict with the appli the principle or theory underlying the | cation but cited to understand |
| 'E' cari | ier document published on or after the international filing date | "X" document of particular relevance, the considered novel or cannot be consider | claimed invention cannot be ed to involve an inventive step |
| cite | ument which may throw doubts on priority claim(s) or which is d to establish the publication date of another citation or other cial reason (as specified) | when the document is taken alone "Y" document of particular relevance, the | alain ad annuadan a sa |
| | ument referring to an oral disclosure, use, exhibition or other | considered to involve an inventive combined with one or more other such being obvious to a person skilled in the | step when the document is documents, such combination |
| P° doc the | ument published prior to the international filing date but later than priority date claimed | *&* document member of the same patent | |
| 25 JULY 2 | actual completion of the international search | Date of mailing of the international sear 30 AUG 2000 | rch report |
| Commission Box PCT | ailing address of the ISA/US er of Patents and Trademarks D.C. 20231 | Authorized officer Tuise L. BLAINE LANKFORD | ince for |
| acsimile No | o. (703) 305-3230 | Telephone No. (703) 308-0196 | 4 } |

PATENT COOPERATION TREATY

REC'D 0 1 MAY 2001 WIPO

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| Applicant's or agent's file reference P23,149 PCT | FOR FURTHER ACTION | See Notif | ication of Transmittal of International Examination Report (Form PCT/IPEA/416) |
|---|---|--|--|
| International application No. | International filing date (day/m | | , — — — — — — — — — — — — — — — — — — — |
| PCT/US00/14637 | 26 MAY 2000 | onali year j | Priority date (day/month/year) 28 MAY 1999 |
| International Patent Classification (IPC) of IPC(7): C12N 9/00, 9/02; C12P 17/02 a | or national classification and IPC | 280; | 26 MAT 1777 |
| Applicant ENVIROGEN, INC. | | | |
| 2. This REPORT consists of a t This report is also accomp been amended and are the (see Rule 70.16 and Section 10.16). | otal of sheets sheets anned by ANNEXES, 1 e., sheet basis for this report and/or she on 607 of the Administrative I | ccording to s of the descrets containing | ription, claims and/or drawings which have |
| These annexes consist of a tot | al of sheets. | | |
| 3. This report contains indications | relating to the following ite | ms: | |
| I X Basis of the report | : | | |
| II Priority | | | |
| III Non-establishment | of report with regard to nov | elty inventi | ve step or industrial applicability |
| IV Lack of unity of ii | | city, mvemi | ve step of industrial applicability |
| V X Reasoned statement citations and explan | under Article 35(2) with rega ations supporting such stateme | rd to novelty. | , inventive step or industrial applicability; |
| VI Certain documents c | ited | | |
| VII Certain defects in the | e international application | | |
| | on the international application | n | |
| | | | |
| Date of submission of the demand | Date o | f completion | of this report |
| 20 DECEMBER 2000 | 26 | MARCH 200 | 1 |
| Name and mailing address of the IPEA US Commissioner of Patents and Trademar Box PCI Washington, D.C. 20231 | ki / | Jed officer STATES BLAINE LAN | Familier For |
| Facsimile No. (703) 305-3230 | Lelepho | one No 170 | 03) 308-0196 |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/14637

| I. B | asis of | the report | | |
|--------|----------------------|--|--|---|
| 1. Wit | h regard | to the elements of the international a | application:* | |
| x | the in | ternational application as origin | nally filed | |
| x | the de | scription: | | |
| | J pages | 1-48 | | as originally filed |
| | | NONE | | |
| | pages | NONE | , filed with the letter of | |
| | 411 | | | |
| LX. | the cla | 49-50 | | |
| | | | , as amended (together with any | , as originally filed |
| | | NONE | , as amended (together with any | |
| | | NONE , | filed with the letter of | , med with the demand |
| | | | | |
| X | | awings: | | |
| | | 1-12 | | |
| | - | NONE | | , filed with the demand |
| | pages | NONE | , filed with the letter of | |
| [x] | the sec | uence listing part of the descript | tion | |
| لثا | pages | NONE | | as originally filed |
| | pages | NONE | | filed with the demand |
| | pages | NONE | , filed with the letter of | , med with the demand |
| | the lan | guage of publication of the inte | or the purposes of international search (international application (under Rule 48.3(b)) or the purposes of international preliminary examples. | |
| pre | h regard liminary | to any nucleotide and/or amino examination was carried out on | o acid sequence disclosed in the international the basis of the sequence listing: | l application, the international |
| | | ed in the international applicati | | |
| | filed to | gether with the international ap | oplication in computer readable form. | |
| | furnish | ed subsequently to this Authori | ty in written form. | |
| | furnish | ed subsequently to this Authori | ty in computer readable form. | |
| | The star | ement that the subsequently furnional application as filed has bee | nished written sequence listing does not go b in furnished | eyond the disclosure in the |
| | The stat been fur | ement that the information recordenished | ed in computer readable form is identical to the | writen sequence listing has |
| 4 X | The an | nendments have resulted in the | cancellation of. | |
| | X th | ne description, pages NON | E | |
| | \square | ne claims, Nos NON | E. | |
| | | ne drawings, sheets/fig NON | | |
| 5 | ٠٠ ــــا | ie did i ing.i. siteetis i g | | |
| ٔ ا | beyond | the disclosure as filed as indicated | the amendments had not been made, since they I in the Supplemental Box (Rule 70 2(c)) ** | have been considered to go |
| in in | icement s | heets which have been furnished to | the receiving Office in response to an invitation u annexed to this report since they do not conta | under Article 14 are referred 10 ain amendments (Rules 70.16 |
| | | nent shee: containing such amendi | ments must be referred to under item I and a | nnexed to this report |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/14637

| Novelty (N) | Claims | 1-13 | YE |
|-------------------------------|--------|------|-----|
| | Claims | NONE | NO |
| Inventive Step (IS) | Claims | 1-13 | YE |
| | Claims | NONE | |
| Industrial Applicability (IA) | Claims | 1-13 | YES |
| | Claims | NONE | NO |
| | | | |
| | | | |
| | | | |
| | | | |